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ABSTRACT:

This final report contains a description of and manual for Project LINK, a program to assist educable mentally retarded and learning-disabled students in various phases of vocational and academic training. The project description presents goals and objectives and addresses methodology. These activities are discussed: advisory committee: LINK (special education) and vocational teacher inservice training, both participatory- and lecture-type: and operational procedures, such as student shop placement and individualization of instruction. Conclusions, recommendations, and dissemination activities are listed. The seven-section program manual begins with a program overview. Program objectives, design problems, and modifications are discussed. Short summaries of the roles of LINK personnel follow. Section 2 describes characteristics of the population served. A discussion of the identification/referral process of LINK students is presented in section 3. Section 4 briefly addresses assessment of student needs, while implementation is the focus of section 5. Topics include attitudes toward mainstreaming, shop placement process, curriculum modification, and follow-through (individual education program and progress report). Sections 6-8 discuss teaching techniques, instructional materials, and student and program evaluation. Sample forms and a bibliography are appended. (YLB)

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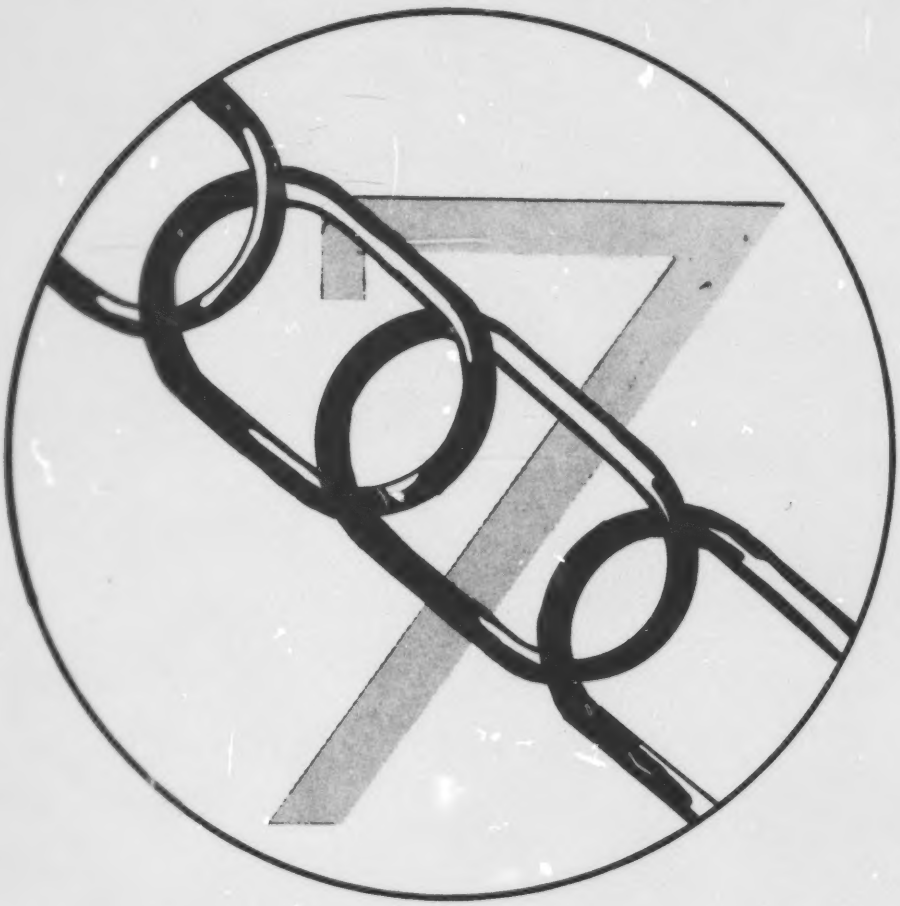

PROJECT LINK:
Program Manual and Final Report 1981

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F I N A L R E P O R T

PROJECT LINK: SPECIAL VOCATIONAL TRAINING FOR SECONDARY LEVEL EDUCABLE MENTALLY HANDICAPPED (EMH) AND LEARNING DISABILITIES (LD) STUDENTS THROUGH UTILIZATION OF AREA VOCATIONAL EDUCATION CENTERS IN NORTHERN KENTUCKY VOCATIONAL REGION SEVEN

BY

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JUNE, 1981

NORTHERN KENTUCKY VOCATIONAL REGION SEVEN
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41017

PROJECT NUMBERS

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ABSTRACT

TITLE: PROJECT LINK
DURATION: JANUARY, 1978 - JUNE, 1981

OBJECTIVES:

1. To identify those EMH and LD students enrolled in local special education classes who are capable of benefitting from specialized vocational training.

2. To modify the students' academic training so that it augments, as much as possible, his vocational training.

3. To rotate a student through various vocational experiences to realistically determine his interests and capabilities.

4. To design a specialized vocational curriculum to train a student in at least one aspect of a given occupation.

5. To supplement the students' classroom training with Co-op experience when appropriate.

6. To place the student in full-time related competitive employment upon completion of the training program.

7. To provide in-service training to personnel in the local districts and the vocational school to ensure continuity of effort between academic and vocational training.

PROCEDURE:

The program was a joint effort of local school boards and vocational education to provide specialized vocational and academic training to EMH and LD students in Region Seven. The general procedure of the program provided for a special education student in the local high school to spend one-half day at the area center and one-half day at the high school, thus continuing to earn credits toward a diploma. The student was enrolled in a vocational program, in a mainstream setting, under the guidance of a trade teacher and special vocational teacher.

CONTRIBUTION TO EDUCATION:

The program provided vocational training to EMH and LD students with the necessary assistance to ensure success and employment potential.

PRODUCTS DEVELOPED:

Final Report, Quarterly Reports, Procedural Package including Procedures, Content, and Bibliography.

PREFACE AND ACKNOWLEDGMENTS

For several years, it was felt that vocational training opportunities could and should be broadened to include special student populations. Project LINK was one response to this in the Northern Kentucky Vocational Region.

Many people fulfilled various vital roles in making Project LINK functional and we wish to acknowledge them for their contributions to the project:

The Administration of the Bureau of Vocational Education

The Northern Kentucky Vocational Region

The Kenton County Area Vocational Education Center

The Vocational Teachers at the Kenton County Area Vocational Education Center

The Staff of the Exemplary Programs Unit of the Bureau of Vocational Education

The Faculty and Staff of the Affiliated Local School Districts participating in the Project

Mr. Charles Fugitt, Principal of Lloyd Memorial High School who served as the catalyst for developing the program concept

Mrs. Mary Ann Hines who prepared the various reports throughout the duration of the project.

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LINK:
Project Description

INTRODUCTION

During the 1976-77 school year, the staff of the Northern Kentucky Vocational Region was approached by a local high school principal concerning the perceived role of Vocational Education in serving the needs of Special Education students. Public Law 94-142 had placed a clear and awesome responsibility on local school districts which, as related to training for gainful employment, were ill prepared to fulfill. It was felt that the resources of Vocational Education would play a key role in meeting these needs - resulting in the project contained herein.

Essential ingredients for meeting the gainful employment goal for special populations existed at the various vocational schools in the area; adequately equipped classrooms and laboratories, experienced faculty, sound working relationships between schools and the motivation to serve all appropriate students.

It was recognized early in the development stages, however, that certain additional resources were needed in order to provide a viable training program in light of the characteristics of the target populations of Educable Mentally Handicapped (EMH) and Learning Disabled (LD) students.

Conventional teacher preparation programs for vocational teachers did not provide indepth training in the characteristics of these special students, nor did they cover any of the fundamentals of Special Education pedagogy. Consequently, it was deemed necessary to provide, on an in-service basis, training for the vocational teachers in such things as characteristics of EMH and LD students, proven teaching methods, subject material accommodations and adjustments, and development of attainable goals for individual students.

Further, it was felt that there was a definite need for a trained Special Education Teacher to be included in the staffing of the school. This was based on the premise that such training program content as life skills, job seeking skills, basic education skills (math, reading, etc.), program and work adjustments by the students and highly individualized instruction strategies would require specialized skills and extra time to properly provide these aspects of the training program.

Similarly, it was felt that "lead time" would be necessary for all personnel effected. It was recognized that Special Education teachers were normally not exposed in any great depth to vocational or occupational training and that Vocational Education teachers were not normally exposed to special education. Consequently, adequate time prior to the actual placement of students into training was felt to be essential in order to properly prepare the faculty for this new responsibility. The "training" of the Special Education teacher included actual student-type experiences in various shops

conducted by the vocational teachers. Through experiencing the activities of vocational students, such as working on cars, fabricating housing units, welding and brazing, the special education teacher became better prepared to understand the requirements and potentials of each program. Consequently, the special education teacher was in a better position to contribute to the development of individual education programs for each student. Similarly, the Vocational Education Teacher worked through the curricular activities of the special education teacher resulting in a better understanding of the resources available to their students. This, in turn, put the Vocational Education Teacher in a better position to assist in individual student program development.

One obvious added outgrowth of this lead-time process was the cultivation of mutual respect for the skills of the personnel involved. By having a basic understanding of the respective skills and abilities of each teacher, the staff was in a much better position to work cooperatively for the benefit of the students.

Finally, the lead-time permitted the seeking and subsequent acquisition of suitable materials and equipment for the program. Since the program was moving into essentially unexplored areas, the acquisition of a basic set of resources, in advance, was obvious.

ACTIVITIES AND ACCOMPLISHMENTS

Problem Under Consideration

During the 1976-77 school year, the administration of Vocational Education Region Seven was approached by a local high school principal concerning possible alternatives available through Vocational Education that would further the educational opportunities for the EMH and LD populations. At this time, there were four programs, under the auspices of the Region, serving various types of handicapping conditions. None of these, however, addressed the needs of the secondary EMH and LD populations enrolled in local school districts. As a result, the LINK concept was developed to fill the void in services available to the target population, secondary EMH/LD.

The intent of Project LINK was to assist EMH/LD students in the various phases of occupational education. The occupational instruction program was divided into two areas; theory (or related) instruction pertaining to the trade area and the skills necessary to be employable in a specific trade area. The program recognized the varied abilities displayed by the target population and addressed these needs by providing a resource person (LINK teacher) whose purpose would be to assist the student in the theory and related portion of trade training and provide a Daily Living Skills curriculum. Included in this portion of the program would be trade-related and remedial math and reading, curriculum modification and assistance in the students everyday vocational training.

The following goals and objectives were outlined to provide direction and sequence to the program. The goals of Project LINK were to:

1. Enable the Educable Mentally Handicapped (EMH) or Learning Disabled (LD) student to progress to his/her maximum level academically by keeping him/her in a school environment.

2. Provide the EMH or LD student with the vocational training which will give him/her a marketable skill with which to enter the competitive job market.

The following objectives were outlined as a means for achieving the aforementioned goals:

1. To identify those EMH and LD students enrolled in local special education classes who are in need of specialized vocational training.

2. To modify the students' academic training so that it augments as much as possible his/her vocational training.

3. To rotate a student through various vocational experiences to realistically determine his/her interests and capabilities and allow him/her to become aware of his/her various options.

4. To design a specialized vocational curriculum within a broad vocational area to provide the student with the necessary skills to enter the competitive job market.

5. To supplement the students classroom training with related co-op work experience when appropriate.

6. To place the student in full-time competitive employment upon completion of the training program.

7. To provide in-service training to personnel in the local school districts and the vocational school to ensure continuity of effort between academic and vocational training.

Due to the nature of the program, certain limitations imposed at the time of implementation were:

1. Project LINK served only public schools: (the area parochial schools did not have special education classes and, as such, made no referrals).

2. The program was limited to the Kenton County Area Vocational Education Center and its affiliated school districts.

3. The prescribed LINK teacher-student ratio was 9 to 1, thus limiting the number of students that could be served at any one time. (This ratio was increased once the program was in operation.)

4. Project LINK was limited to two specific special populations; EMH and LD. This program, for example, was not designed to accommodate TMH, Emotionally Disturbed, Behavior Disordered or the Orthopedically Handicapped populations.

5. The shops which were involved in Project LINK were Auto Mechanics, Auto Body, Welding, Carpentry, Air Conditioning and Refrigeration, Health Careers, and, on a limited basis, Industrial Electricity. Commercial Art and Sheet Metal were closed to LINK students during the first year of operation.

6. To avoid over-crowding in any one shop area, limitations were placed on the number of students that could enroll in each shop. Two students per teacher during a shift were the limits set.

Methods

Pre-operational Procedures

Six months preceding implementation, a Special Education teacher was hired to serve as the LINK teacher. During this lead time, program activities vital to implementation took place. These activities are discussed in the followirg paragraphs.

Advisory Committee

The Advisory Committee for Project LINK was formed prior to implementation. Its members consisted of:

1. Counselors from the feeder high schools.
2. Administrative representatives from these schools.
3. Representatives from the vocational administration.
4. Area directors of Special Education.
5. Special Vocational personnel.

The basic functions of this committee were:

1. To serve in a public awareness capacity at their respective high schools.
2. To assist in developing programmatic and student criteria. (Specific guidelines suggested in committee are discussed in Section Appendix A.)

Link Teacher In-Service Training

The LINK teacher devoted much of this lead time to active participation in those shop areas that would accommodate LINK students. Activities in the shops included; viewing texts and CBVE materials, working in each trade area, and formulating a modified curriculum with the trade teacher. (This portion of the program was advantageous based on the Special Education teacher's limited knowledge of Vocational Education.)

Vocational Teacher In-Service Training

At the University level, classes had been designed to assist the vocational teachers in dealing with the special needs student. It was found that further training would be necessary before LINK could be implemented. In-service sessions were conducted to address the needs of personnel including referring and trade teaching staff.

In-service was divided into two types, participatory and lecture designs. Both types of inservice were used as determined by the objectives for the in-service. Below is a discussion of in-service activities provided for personnel who would be directly involved with LINK students.

Participatory-Type In-Service

This in-service was provided for the personnel that would be referring potential LINK students to the vocational school. During this workshop, referring personnel participated in planned activities in five trade areas. For example, in Auto Mechanics, the participants viewed the CBVE module detailing the process of changing the oil in an automobile. Upon completion of the module, the participants were asked to implement this process in the shop area. In Auto Body, the participants simulated the painting process in the paint booth using a spray gun and other equipment.

The objectives set for this in-service were:

1. To introduce the LINK concept.

2. To allow referring personnel to experience what LINK students would encounter at the vocational school.

Lecture-Type In-Service

The informational-type in-service was conducted for the vocational staff that would be responsible for training the special needs student in a trade area. Activities during this in-service were provided by a Special Education Consultant and included a discussion of types of disabilities, learning styles, and effective strategies. (It should be noted that in-service is an ongoing process and was not terminated upon implementation of the program).

The objectives set for this in-service included:

1. Familiarizing the teachers with the types of student disabilities they would encounter.

2. Equipping the teacher with alternative teaching methods with which to deal with these disabilities.

Operational Procedures

Student (as well as program) success was contingent upon appropriate shop placement. As a result, thorough vocational assessment of LINK candidates was high priority. In the early development stages of the program, rotation, along with pertinent data supplied by the high school were the sole criteria used to secure shop placement. Rotation, in essence, allowed potential LINK students to move through each shop during the first weeks of school. Then, based on this exposure, the student in conjunction with the LINK teacher made a decision regarding shop placement. The rotation process lacked in formality and gave a limited view of the students vocational potential. Based on this deficit, acquisition of formal assessment materials became necessary. Although many vocational assessment instruments would have met program needs, the Comprehensive Occupational Assessment Testing System (C.O.A.T.S.) Job Match, was selected in conjunction with the Singer Work Samples. The combination of these formalized instruments has virtually eliminated the placement problems experienced early in the program.

In keeping with the mainstream concept the LINK students'daily schedule adhered to that of the regular vocational student. LINK students attended vocational school one-half day and high school the other half. The LINK students' vocational training varied from the routine in two aspects. While the student was enrolled in a regular trade area, the curriculum was often modified. These modifications included many special Vocational techniques from taping texts to narrowing the student's curriculum, depending on student abilities. Secondly, the student was pulled from the shop, as needed, for supplemental instruction in trade-related math and reading and pre-vocational and other activities. The time spent out of the shop in the LINK classroom varied from student to student, depending on the type and severity of the disability.

A common problem area among teachers was the individualization of instruction necessary to train the EMH/LD student. With the region-wide curriculum revision, this problem was alleviated due to the nature of the changes implemented. The revised curriculum is an individualized plan of instruction suited to the industrial realities of the Northern Kentucky area. This change in the plan of instruction was beneficial to the special education student as well as the general population.

Individualization of student instruction was enhanced by the teacher's involvement in the student's vocational I.E.P. The vocational I.E.P. reflected any modifications or limitations in the student's curriculum and also contained an outline of pre-vocational, social or daily living skills to be taught. The Progress Report, completed by the LINK and shop teachers bi-weekly, was used as a means to keep up-to-date progress checks, and secure a list of future assignments. (The I.E.P. and Progress Report are discussed in further detail in Appendix A.)

Results and Conclusions

As a result of three years of operation, it is the opinion of the staff of Region Seven that mainstreaming of EMH/LD secondary students

is a viable alternative for special needs populations that can be readily implemented in any vocational setting. The effective implementation is contingent upon the setting of specific guidelines and policies which are derived from the following conclusions:

1. Rotation (as discussed in Appendix A) is not effective as a means of assessing a student's vocational potential.

2. Shop areas to accommodate LINK students will be judged appropriate/inappropriate based on:

   a. Subject matter
   b. Industrial requirements
   c. Employment opportunities

3. Constraints need to be made on the number of special students that may enroll in a shop.

4. The LINK teacher/student ratio will be contingent upon the disability of the students and the shop area in which they enroll.

5. In-service training of referring and teaching staff will need to be provided.

6. Communication with the local school districts will continue to be strengthened through in-servicing and quarterly progress meetings.

7. Modification of student curriculum will need to be organized around the existing curriculum provided for other vocational students.

8. Objectives #5 and 6 will be given more emphasis in terms of co-op, placement and follow-up.

Recommendations

1. Formal assessment of student vocational potential is imperative. Implementation of formalized assessment procedures provides necessary student information and confirms appropriate shop placement.

2. Certain programs may need to be excluded from LINK student participation. Factors in making these exclusions will include local marketplace characteristics, job opportunities for students with limited training.

3. A limit of two special education students, in one teacher shops per shift, set initially in the program plan, worked effectively in the training program. Some limitation will be needed.

4. The recommended LINK teacher/student ratio is 10 to 1.

5. In-service topics to address include:

   a. Orientation for referring staff
   b. Discussion of disability and effective teaching strategies for teaching staff
   c. I.E.P. development
   d. Due process procedures

6. Open lines of communication with the high school personnel are imperative for student and program continuity.

7. The present one-teacher LINK program does not allow the time needed to secure co-op or placement positions and conduct follow-up needed to adequately serve special education students. Based on the difficulty in reaching program goals for co-op and placement and follow-up, it has been recommended that the LINK program be staffed with two full-time special education teachers who would share the responsibilities of the transition from the school environment to the world of work.

DISSEMINATION ACTIVITIES

The dissemination of LINK-related information has been an on-going process, conducted throughout the three year exemplary period. Several means have been employed to relay this information to the public. The communication technique used and the respective audiences (to date) are listed below.

Written and Verbal Communications

- Texas Technical Institute
- Bureau of Education/Exceptional Children
- Kentucky Association of Vocational Education, Special Needs Personnel
- Craft Advisory Committee

In-services/Workshops

- Vocational Staff
- Referring Personnel from the Local Education Agencies

Public Consultants/Presentations

- Bowling Green
- Russell County
- Laurel County
- Ohio County
- Seminar for National Academy of Vocational Education/ Ohio State University
- University of Central Florida

Public Representations

- Florence Mall Vocational Exhibit
- Kentucky Educational Television

Future dissemination of program products will be conducted in conjunction with the Bureau of Vocational Education. A partial list of the audiences to be addressed are as follows:

- Bureau of Education/Exceptional Children
- Regional Directors/Vocational
- State Advisory Council, Ex. Secretary
- Superintendents of Public Schools
- Vocational School Principals and Coordinators
- Local School Principals, Senior High
- Concerned University Officials
- Directors of Special Programs
- Specified Special Vocational Education Teachers

The final program product consists of a written communique which includes the following as each topic relates to the LINK Program:

Program Overview
Description of the Population
Identification/Referral Process
Assessment
Implementation
Teaching Techniques
Instructional Materials
Evaluation

LINK:
Program Manual

SECTION I

LINK PROGRAM REVIEW

At the time of Project LINK's conception, there were four direct operated programs in operation serving various types of handicaps in Region Seven. These programs, however, did not address the needs of the secondary Educable Mentally Handicapped or Learning Disabled students enrolled in local high schools. An idea was expressed by local districts and the vocational school, that many of these students might best be served through cooperative efforts on both fronts, local and vocational. The need, it seemed, was not in enrolling the student in a vocational class, but, rather, to ensure success once enrolled. Local districts found that once special education students were enrolled in a vocational class, they began to feel overwhelmed and lost in the vocational setting. It was at this time that the LINK "function" came into perspective - supportive service for special education students who would attend vocational school. At this point, the concept of a Special Vocational Education instructor evolved. The SVE instructor was to be degreed in Special Education and to have expressed willingness to learn and ultimately teach vocational concepts missed by the EMH and LD students during regular shop instruction. The combination of the shop instructor's skill in the trade area and the SVE instructor's expertise in teaching special needs students, it was felt, could provide balanced vocational opportunities for students who might otherwise go without the benefits of vocational education.

As a result of careful planning and forethought, the SVE instructor was hired with six months lead time. During these six months, the LINK (or SVE) instructor was oriented to vocational concepts and given an opportunity to study each shop in which his/her students would be enrolled. Also during this time, an Advisory Committee was set up to assist in all phases of program "mechanics." (The Advisory Committee is discussed in further detail in Section III.)

Program Objectives were designed to give scope, sequence, and definition to the total LINK concept. The initial program objectives proposed were to:

1. Identify those EMH and LD students enrolled in special education at the high school who are in need of specialized vocational training.

2. Modify the student's academic training so that it augments, as much as possible, his/her vocational training.

3. Rotate a student through various vocational experiences to realistically determine his/her interests and capabilities.

4. Design a specialized vocational curriculum within a vocational area to provide the student with the necessary skills to successfully enter the competitive job market.

5. Supplement the student's classroom training with related co-op work experience, when appropriate.

6. Place the student in full-time, training-related competitive employment upon completion of the training program.

7. Provide in-service training to personnel in the local districts and the vocational school to ensure continuity of effort between academic and vocational training.

As the program developed and ideas flourished, several design problems were encountered. Below is a discussion of these problems and a brief consideration of feasible solutions.

1. Lack of information about vocational school on the part of referring personnel (high school teachers and counselors) proved to be a barrier in effective communication. "How much reading, math, shop time, and class time will be involved?" were questions asked frequently by referring personnel. To inform the referring personnel of the complexities and technology involved in vocational training, a workshop was conducted. This workshop occurred during the school year preceeding LINK implementation. The teachers and counselors spent one day working through a variety of shops, getting involved in shop activities, looking over texts and getting an idea of what prospective students would encounter. In the final evaluation done by the participants, each felt that the workshop had provided them with much needed information and perspective enabling them to better serve LINK candidates.

2. As was expected, the staff at the Kenton County Area Vocational Education Center felt apprehensive with regard to serving special education students in their classrooms. Overcoming this obstacle was perhaps the predominant step of many steps toward ensuring LINK acceptance.

   Before the program was put into operation at KCAVEC, the staff attended a workshop concerning special education students entering the vocational school. The workshop was conducted by a local director of special services with expertise in vocational training and the handicapped. Topics discussed during the workshop included:

- Types of disabilities.
- Symptoms of specific disabilities.
- Effective Communication techniques and teaching strategies that work with EMH and LD students.

Hand-in-hand with pre-service training was the initial learning period for the LINK instructor. During this time, the LINK and shop teachers spent a great deal of time covering curriculum, general and specific. A tone of openness and honesty between LINK and shop teachers was set during these conferences. A "guarantee," on the part of the LINK teacher, to be visible and available during the school year to discuss achievements or setbacks with the shop teacher provided a sound basis for a strong working relationship.

3. Communication between LINK, vocational, and high school personnel was a key factor in student success and program continuity. The delegation of responsibility, at times, was not clearly defined, particularly regarding the following issues:

   - Fully informing the student of the type of vocational program he/she was to be involved in. In light of some confusion, it was decided that this issue was to be a shared responsibility between the home high school teacher and the special vocational instructor, at the time of referral and again during the student interview.

   - Notification of the vocational staff concerning the introduction of the LINK Program into the regular curriculum. To avoid undue strain and apprehension, the staff would be informed early about the program, a responsibility of the Principal.

   - Organization of the Admission and Release Committee meetings was usually handled at the high school. The LINK teacher made a point to keep abreast of upcoming meetings for the purpose of attending the meeting to represent the vocational aspect of the student's total curriculum.

4. Initially, the shop teachers expressed concern about the time that students would spend out of the shop and in the LINK classroom. In dealing with this problem, the LINK teacher dealt with the shop instructors individually to set up a suitable student schedule. Normally, the student was out of class and in LINK during individual shop or class time, thus upsetting the regular class routine, as little as possible. By meeting with the shop teacher and sharing the content being covered in the LINK classroom, the shop teacher was assured that

LINK training was directly related to shop curriculum and job acquisition skills. In other words, students did not "waste time" in the LINK classroom.

5. Rotation, in isolation, was not effective as a means to determine shop placement. As will be discussed in further detail in Section IV, rotation has the edge on simulated assessment by allowing the student to experience the training area, viewing tools, texts, teacher expectations, etc. Rotation approximates a real-life situation. Simulated assessment lacks this quality. However, the need for formal assessment arose in light of the need to analyze, in depth, the total student. The decision to use formal assessment in conjunction with rotation made it necessary to explore the type of instruments to be used. Although many assessment packages would have met our needs, a combination of the Comprehensive Occupational Assessment and Training System (COATS) Job Matching System, and the Singer Work Samples were chosen. The addition of this approach provided a more comprehensive picture of the student.

6. In actual practice, there was little time for improving math and reading skills. Student LINK time, as discussed earlier, was limited; 1 to 4 hours per week depending on the student. By relating all skills to vocational content currently being taught in shop, the student was motivated to acquire these skills while accomplishing needed shop work. Examples of this concept included using actual texts to bring up reading levels and improving trade-related sight vocabulary and employing trade related math texts and teacher-made problems related to the vocational program.

As a result of two years of operation, a list of modifications were written, more clearly defining the actual everyday operation of Project LINK. They include:

1. The addition of formal assessment procedures to the program enhanced its effectiveness by analyzing the total student.

2. The Individual Education Plan (IEP) (see Section V) and Progress Report became important tools, adding scope, sequence, and direction to the student's shop and LINK activities.

   The IEP was integrated into the program as an ongoing long-term direction and evaluation technique set up by the shop and LINK teachers with input from the Principal. The Progress Report evolved as a more frequently utilized backup to the IEP. The Progress Report, written bi-weekly, was used as a "here's where we are"

compared to "here's where we're going" documentation of everyday activity. It was during these Progress Report meetings that the LINK teacher could find out what was to be taught during the next two weeks and student accomplishments in the past two weeks.

3. The development and implementation of a Region-wide Competency-Based Vocational Education (CBVE) curriculum system had a positive impact on the organization and indivualization of the student's programs and was well suited to the special needs learner.

   Briefly, the Region's CBVE Curriculum follows the tenets of Mastery Learning Theory which states that the majority of students in the present vocational structure can reach a high level of mastery if instruction is approached sequentially and without group comparative time frames. This theory differs from traditional thought that a normal or Bell shaped Curve (see Figure A) is desirable or effective. The traditional learning theory assumes that only a small percentage of students master the assigned task. The Region's CBVE curriculum allows each student to progress at his/her own rate and be tested only when the student demonstrates successful mastery of the skill. (The Mastery Learning Curve is shown by Figure B)

FIGURE A

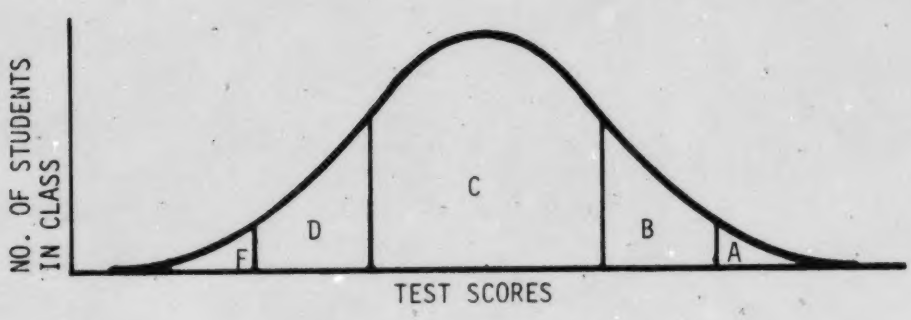
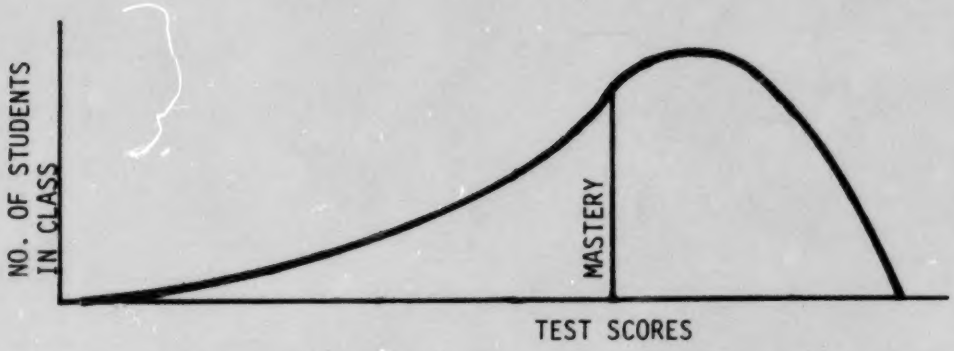


FIGURE B



If at the time of testing the student has not mastered the necessary competencies, he/she may repeat instruction and be retested.

In addition to sequential learning, a list of Job Titles using the Dictionary of Occupational Titles codes, appropriate and localized for this industrial area, was developed that coincide with specific skills to be taught, thus producing a trainee likely to be employable in this locale. Fortunately for LINK students, this curriculum approach lends itself to a breakdown whereby a student may be trained in one, two, or many employable skills depending on his/her ability.

Further, the CBVE approach to curriculum and learning replaces time limits with consistent proficiency standards.

ROLES

As might be imagined, a program as comprehensive and detailed as LINK required cooperation and input from many sources. Authorities in various aspects of education were called on at one time or another to provide resource information or help in important decisions. Personnel directly involved in the LINK process are listed below with a short summary of their role in the total program.

VOCATIONAL TEACHER

The vocational teacher was a key factor in the success of Project LINK. The Vocational Teacher's effect hinged upon acceptance of the total LINK package as a viable solution to the problems of the special needs learner. A summary of duties includes:

- Attending pre-program workshops.
- Conducting the rotation process in collaboration with the LINK teacher.
- Having input into the student's Individual Educational Plan (IEP).
- Meeting bi-weekly with the LINK teacher to pass on assignments and update student records.
- Assisting in the modification of a student's program.
- Keeping the LINK teacher informed about students.
- Evaluating student progress in conjunction with the LINK teacher.

THE LINK TEACHER

The effectiveness of the program itself depended a great deal on the LINK teacher. Work involved before the program was actually in operation included:

- Studying and becoming familiar with vocational programs in which LINK students would be enrolled.
- Setting up an Advisory Committee.
- Conducting in-service for referring personnel.
- Setting up workshops for the vocational staff.
- Becoming familiar with each staff member's techniques and strategies.

Once the program was in operation, the responsibilities of the LINK teacher became more student-related and included:

- Representing LINK and the Vocational School at Admissions and Release Committee Meetings.
- Interviewing, assessing, and rotating referrals.
- Mainstreaming students into appropriate vocational programs.
- Designing the Individual Educational Plan (IEP) in conjunction with the shop teacher.
- Meeting bi-weekly with each shop teacher to check student progress.
- Working with students from shops, individually or in small groups, one to four hours per week per student, as needed for supplemental instruction.
- Providing a Daily Living Skills program based on the student's level of competency in this area.
- Assisting in the evaluation of student progress.
- Meeting four times a year with each referring high school's staff and working with them to augment academic training with vocational training.

REFERRING HIGH SCHOOL SPECIAL EDUCATION TEACHER

By knowing the student well, the high school Special Education Teacher was a valuable source of assistance in the referral and learning process. His/her responsibilities consisted of:

- Participation in LINK related in-service.
- Initital referral of LINK candidates.
- Providing current math and reading scores for referrals.
- Attending Admission and Release Meetings.
- Attending periodic meetings with the LINK teacher to discuss student progress.
- Substituting regular high school curriculum (when possible) with vocationally related concepts. (For example, if a vocational student needed to learn to read a rule and the LINK teacher's time was limited, this need was conveyed to the high school where it could be taught in math class.)

REFERRING HIGH SCHOOL COUNSELOR

The Counselor's role in the LINK process was vital in that they served as school representatives and provided valuable resource information. Among their responsibilities in the LINK process, were:

- Gathering and packaging data on students.
- Setting up and, in most cases, presiding over Admissions and Release Meetings.
- Assisting in working our administrative details (allotments, shop placement, etc.).
- Attending the LINK in-service.

THE VOCATIONAL SCHOOL PRINCIPAL

The Principal was able to deal with problems beyond the control of the LINK teacher. His administrative knowledge and authority helped to pave the way to success. His duties included:

- Initial introduction of the LINK concept to vocational staff.
- Participation in the staff workshop.
- Arranging slots for LINK students in the shop.
- Input in IEP development.
- Assisting the LINK and shop teacher with problems.

REGIONAL VOCATIONAL ADMINISTRATION

The vocational administration in Region Seven was involved from the conceptual through the developmental stages of Project LINK. This sort of support was imperative to region-wide acceptance of the program. In addition, the vocational administration was involved in on-going evaluation of the LINK program.

LOCAL DIRECTORS OF SPECIAL EDUCATION

The local Directors of Special Education were the first real contact for LINK with outside agencies via an Advisory Committee. In this capacity, they were able to convey information about the program to personnel effected and to the public.

REFERRING HIGH SCHOOL PRINCIPALS

The High School Principals served in much the same fashion as the Directors of Special Education. In some cases, they served as the administrative representative at Admission and Release Meetings.

THE ADVISORY COMMITTEE

The Advisory Committee provided valuable resource information, particularly during the formative stages of the program. With assistance from the Committee, specific program and student criteria were established for the first year of operation. Listed below are those decisions agreed on in committee:

1. A limit of 16 LINK students was established, per school year - 8 morning and 8 afternoon students.

2. It was decided that no more than 4 students per teacher - 2 morning and 2 afternoon - would enroll in any shop during the school year.

3. Referring personnel as well as vocational staff would participate in a LINK workshop.

4. Selection of students would be based on the student's IEP reflecting the need for a specialized vocational program.

5. LINK candidates should read at the third grade level or above.

6. LINK candidates should possess the necessary cognitive ability to learn basic computations.

7. Students would be officially enrolled in Special Education at the high school in order to qualify as a candidate for a LINK program.

8. Most importantly, to be considered for LINK, the student would have to clearly demonstrate vocational potential.

As the Vocational School became more experienced in serving the EMH/LD student, certain of the above decisions were modified. Restrictions previously placed upon students with less than third grade ability have been lifted and student load increased to 20, 10 morning and 10 afternoon.

SECTION II

DESCRIPTION OF THE POPULATION

During the 1979-80 school year, two Project LINK programs existed in Region Seven; the Kenton County Area Vocational Education Center (KCAVEC) and the Chapman Area Vocational Education Center (CAVEC). Although each LINK program served separate school districts, both were located in Kenton County. KCAVEC served:

Simon Kenton High School
Dixie Heights High School
Beechwood High School
Scott High School
Lloyd High School

while CAVEC served:

Holmes High School
Newport High School

(Numerous parochial schools also utilized these area centers but did not refer students to Project LINK.)

Students from various types of geographical and economic areas and backgrounds were, at one time or another, served in a LINK program; KCAVEC serving urban and rural, and CAVEC serving inner city.

More importantly, Project LINK served a particular type of student, the handicapped. In practical terms, a handicapped person is one who has a mental or physical impairment which prevents the individual from experiencing success in the regular vocational program, without support of modification. Project LINK was designed to serve two types of handicapping conditions; the Educable Mentally Handicapped (EMH) and the Learning Disabled (LD).

EDUCABLE MENTALLY HANDICAPPED

The EMH individual will display an intellectual development approximately 50-75% that of the majority of the population. As the title implies, this type of student is educable. Though many will fall short in academic studies, these students can be educated and experience success in the world of work, contribute to society, and attain self-respect.

The EMH student may exhibit one or several of the following characteristics:

- Delayed language development (Speech patterns incomplete or broken).
- Observable discrepancy between behavior and age (Seems younger than age indicates).
- Poor large or fine motor ability (difficulty handling small objects or awkward in balance and coordination).

- Short attention span (difficulty completing assignments of any length).
- Difficulty in memory retention (forgets earlier learning).
- Difficulty in transferring of learning (cannot apply it to new learning).

LEARNING DISABLED

The L.D. student is characterized by one or more disorders in the basic processes that help us to understand written and spoken language. A learning disability may interfere with any of the following areas: listening, talking, reading, writing, thinking, math computation, or motor ability. This classification does not include mental retardation, visual or hearing impairment, or emotional disturbance. Learning disabilities may generally be classified into three types:

1. Visual Disability

   A visual disability indicates that the student has difficulty detecting, understanding, retaining, or processing information presented to him/her visually. Common characteristics of this type of disability might include, but not be limited to:

   - Consistent errors in response to written directions.
   - Holding reading materials at a very close range.
   - Being distracted easily.
   - Confusing words that look similar to one another.
   - Confusing foreground with background; lack of discrimination skills.

2. Auditory Disability

   An auditory disability indicates that the student has difficulty perceiving those things he hears and has problems getting auditory input to "make sense."

   Common characteristics of this type of disability might include, but not be limited to:

   - Consistent errors in following oral directions.
   - Difficulty locating a sound source.
   - Lack of discrimination between similar sounding words.

3. Motor Disability

A motor disability indicates that the student has difficulty in movement, relationship to the environment, and assessing environmental information.

Distinguishing traits common to, but not limited to, this disability include:

- Illegible handwriting.
- Clumsiness (awkward, falls easily).
- Showing no hand preference (is neither right nor left handed).
- Problems in writing or drawing.

SECTION III

IDENTIFICATION/REFERRAL OF LINK STUDENTS

Entry into a Vocational/LINK system constitutes a change in that student's program. According to current regulation, when a change occurs in a student's course of study, an Admission and Release Committee Meeting must be held. In most instances, the A & R Meetings for LINK students were handled by the School Based Admission and Release Committee (SBARC) comprised of:

- A chairperson (building principal or designee - not a teacher).
- Referring teacher.
- Teacher(s) of exceptional children.
- Parents.
- The referred client.
- Personnel responsible for providing evaluative information.
- Others, as requested by the committee (in accordance with 707 KAR 1:051).

(A regulation is now pending that would mandate that a representative from a receiving agency (e.g., LINK) be present at the A & R Meetings.)

The functions of the Admission and Release Committee included:

A. Receiving written referral of students currently enrolled in school and thought to be in need of special education or related services.

B. Following due process procedures to ensure that exceptional students and their parents are guaranteed procedural safeguards in decisions regarding identification, evaluation, and educational placement.

C. Assuring that appropriate evaluations on referred children are conducted and obtained.

D. Discussing results of formal and informal evaluation.

E. Making recommendations as to appropriate services and/or programs for the identified child, in the form of an Individualized Education Program (IEP).

F. Reviewing, at least annually, the pupil's IEP and review placement of each child in the school in relation to his or her educational progress in that setting to determine if the student should:

- Continue in the current educational placement.
- Change the current educational placement.
- Be dropped from special education or related services.

G. For those who are determined by the A & R not to need Special Education or related services, the committee provides the referring person and parents with a written explanation why the child is not to receive Special Education.

H. Referring cases to the district AARC, when needed services are not available within the school.

Until a regulation concerning the receiving agency is put into effect, the LINK teacher may only request A & R schedules and invitations to attend these meetings. Based on the experiences of LINK teachers and supervisors, it was imperative for the LINK teacher to be present at A & R Meetings concerning LINK referrals. In most instances, the local districts agreed with this and LINK was represented in committee; a few did not. In cases where the LINK teacher was not advised of A & R Meetings, valuable student information was lacking at the vocational school, thus creating problems for staff and student.

PHASES OF IDENTIFICATION/REFERRAL

The actual Identification/Referral Process related to LINK was broken down into phases. A discussion of these phases is presented in the following paragraphs.

Phase I

The LINK teacher contacted each school principal and special education teacher requesting a meeting at the high school, at their earliest convenience, to explain Project LINK. During this meeting, the LINK teacher was given an opportunity to get acquainted with the school staff, explain their role in the program, and discuss the type of student appropriate for LINK referral. The meeting was held prior to allotment distribution (December-February) so that referred pupils could be worked into regular shop enrollment for the next year. (During the first year, referral meetings occurred late in Spring, causing LINK students to be enrolled as extra students in the shops which created problems.) Also, during these initial meetings, the schools were informed of how many students they could send to the vocational school for the LINK program.

Phase II

At this time, the Special Education staff and counselors collected pertinent information on those students being considered for LINK/Vocational placement. Information requested by the LINK teacher included:

- School records.
- Basic skills testing (current reading and math assessments).
- Medical data
- Psychological assessment.

Phase III

A personal interview with each LINK candidate was then set up. Following the interview, formal assessment of the student's vocational interests and aptitudes took place.

Phase IV

When all of the above steps had been completed, an Annual Review or A & R Meeting was held at the high school involving the parents, student, Special Education teacher, LINK teacher, counselor, and school administrator. This meeting determined certain academic placements and a discussion of the student's vocational potential. Also in this meeting, a recommendation was made, based on assessment, as to which shop the student would enroll.

As can be seen, procedures involved in the Identification and Referral of students involved active participation on the part of high school and vocational staff. A sound working relationship between academic and vocational personnel was established during the referral process in an effort to meet the needs of students.

SECTION IV

ASSESSING STUDENT NEEDS

As discussed in Section I, during the first year of operation, Project LINK lacked formal vocational assessment. In its absence, an informal assessment procedure was used. The assessment technique, Rotation, was conducted in the following manner. Upon determination by the A & R Committee that LINK placement was appropriate for the student, he/she was enrolled for the next school year without specific shop placement. On the first day of school, the students reported directly to the Link teacher and were briefed on what was available at the vocational school and given some basic orientation information about each shop. Based on this orientation, each student was asked to list those shops in which he/she was interested and also those about which he/she desired more information. From this list furnished by each student, the LINK teacher wrote a Rotation schedule, affording each student an opportunity to experience by participating in at least three programs for which he/she had shown an interest or desire for more information. In most instances, a vocational choice had been made by the end of the second week of Rotation and the student was placed in a shop. Problems, however, were encountered with this system:

- A complete picture of the student's cognitive, affective, and psychomotor abilities could not be attained.
- Although the shop teachers had designed tasks for the students in order to assess informally, the student exposure was limited.
- During the first weeks of school, while LINK students were involved in Rotation, vital shop orientation and safety information was covered that they would miss.
- The Vocational class, in most instances, was filled before the LINK student had made a decision, resulting in overcrowding in several instances.

In light of the above complications, Rotation in isolation was found to be an ineffective method of evaluation.

A determination of the student's cognitive (knowledge), affective (attitude), and psychomotor (skill) levels was needed in order to properly assess the student's vocational potential and provide the student necessary guidance to minimize inappropriate placement of students and errors in judgement.

In choosing an assessment instrument, the LINK teacher, in collaboration with the Advisory Committee, sought a test that:

- Consisted of nonverbal response.
- Enabled the evaluator to observe the student in the testing situation.

Although many formalized occupational assessment packages were explored by the LINK teacher and the Advisory Committee, two were found most effective in meeting our needs. These tests met those requirements listed above and could be done in advance of the Fall term. C.O.A.T.S., the Comprehensive Occupational Assessment and Training System gave the LINK teacher a well balanced look at the student in terms of occupational preference, frame of reference, and self concept as a worker. The C.O.A.T.S. System addressed the student's cognitive and affective domains. Left yet, except by observation, was the student's psychomotor (or skills) level. A determination of the student's mechanical abilities and performance was still needed for a comprehensive assessment package. At this time, the Work Samples by the Singer Company were introduced into the program. With the addition of the Work Samples to the C.O.A.T.S. Job Matching and Rotation approaches, a well-rounded, total student picture was obtained.

As mentioned earlier, the C.O.A.T.S. and Singer Assessment took place during the late Winter and early Spring of the school year before the student was to enroll in vocational school. With the assessment information in hand, the LINK teacher was able to cluster the students and set up a meaningful Rotation schedule for each student, either in the Spring or Fall.

NOTE: The assessment package, (C.O.A.T.S., Singer, and Rotation), was set up based upon the time and money available to the LINK program. These variables will differ with each district changing with the amount of time for assessment and availability of resources.

Other assessment approaches experimented with during the developmental stages of Project LINK included:

1. Using C.O.A.T.S. in conjunction with a highly structured rotation schedule in which the student was worked through a job performance task in the shop. These tasks, designed and set up by the LINK and shop teachers, assessed the student's general ability in that area and afforded the student the opportunity to actually be involved in the shop. (This approach was used when the resources necessary to purchase the Singer Work Samples were not available.)

2. A second approach provided prospective LINK students tours and visits during the school year

previous to enrollment. Feedback from students and the home high school teachers concerning this addition to the program was positive. The teachers felt it gave the students a "beforehand" look at what could be expected the following year. At this time, students were able to meet and speak with each shop teacher and to ask questions. Also, the students met with the LINK teacher allowing time to explain the role of LINK in the vocational process. (This approach was tried in place of Rotation and in conjunction with the C.O.A.T.S.)

Admittedly, there are many approaches to the proper assessment and placement of LINK/vocational students. The combination of C.O.A.T.S. (Job Match)/Singer (Work Sample) in the Spring and Rotation on an as-needed basis was found to meet the needs of the LINK population most effectively.

SECTION V

IMPLEMENTATION

A. Student and Staff Attitudes Towards Mainstreaming

It is a well known assumption, amongst students of human psychology, that an individual's behavior and reactions rely strongly upon the person's attitudes, beliefs, and notions. This concept holds true for students and staff as they work through and attempt to accept the mainstreaming process.

The student's attitudes may be based on a succession of previous failures. This defeatist attitude hinders motivation as well as the entire learning process.

Staff attitudes may be based on common myths surrounding the handicapped or an unpleasant experience which involved a handicapped person. These factors also impede the learning process, as attitudes are not easily disguised and, at some point, will reflect in the way the teacher deals with the student. One of the most common teacher-centered pitfalls of the mainstreaming process is the tendency to allow the LINK student to perform below set criteria levels for "regular" student out of sympathy or a belief that the student cannot learn, creating false security within the student.

It should be noted that attitudes can be changed or directed; but, this is an internal process controlled by the individual. To assist the teacher in developing positive attitudes towards mainstreaming, several techniques are suggested that could be easily implemented and would benefit the student. These are as follows:

- Base the goals set for the student on his or her capabilities, not on the present level of functioning. Express to the student high expectations and a willingness to assist in achieving these goals.
- Praise the student for progress. Achievement in small steps is still achievement and deserves recognition.
- Admonish the student, when necessary, to assure constructive participation.
- Have a sense of humor. Don't be afraid to laugh with the student; everyone will be more relaxed.
- Remember that it is a natural tendency to avoid weaknesses and develop strengths. This will be particularly true of the handicapped. Enlist the supportive services provided by the LINK teacher to develop the skills necessary to be successful in the trade area.

In the following paragraphs, a discussion of some of the more common concerns of the staff are noted along with responses or ideas to abate these apprehensions.

"Will the student demand much more of my time?"

The mainstreaming process need not disrupt the instructional process or tax the energies of the teacher. As discussed in the assessment procedures, students were placed only in those shops that could accommodate the student and in which the student demonstrated potential and interest. In addition to proper assessment, the shop teacher was asked to work in cooperation with the SVE teacher, so that the training process could be a shared responsibility; thus, relieving the shop teacher of some time demand problems.

"Will the student give my program a 'bad' name within the school or with industry?"

Several staff members expressed genuine concern that the LINK students enrolled in their program would not complete all levels of training in the time period provided. These staff members felt that the introduction of "slow" students into the class would mean a lowering of the standards or proficiency criteria necessary for success in the trade area. Their concerns then were twofold - the student's inability (in some cases) to complete the class in two years and a lowering of proficiency levels. To address the first concern, it was pointed out that all parties were aware that two years would not be sufficient for all students. In rare cases, students entered the program as sophomores, allowing three years for training. In response to the second concern, the possibility of curriculum modification was introduced as a way of limiting the total program in light of the student's capabilities.

"I feel like priority should be given to the regular vocational student, the one's I can help the most."

At this time, it was pointed out to the teacher that, legally, the handicapped individual is considered a regular vocational student and must be served in order to comply with federal legislation. It was further pointed out that service to the handicapped was an expressed mission of the Region and that Project LINK was one of many programs designed to meet the needs of the handicapped.

The primary myth surrounding the EMH/LD student population equates slowness with the inability to learn. Any individual, be they handicapped or non-handicapped, will become frustrated, easily distracted, and uncooperative when required to attend to a task beyond their capabilities. The teacher must remember this in dealing effectively with any student.

The vocational principal was a key factor in the outward acceptance of the mainstream program. His acceptance and support created a positive atmosphere conducive to acceptance and successful implementation.

A cooperative, supportive, and sensitive learning environment coupled with a team approach involving the principal, shop, and LINK teachers necessary ingredients for success.

B. The Shop Placement Process

The nature of the students that enrolled in vocational school via LINK dictated that some shops be closed to them during the first year of operation at the Kenton County Area Vocational Education Center. Upon recommendation of the Advisory Committee, LINK students were enrolled in Auto Mechanics, Auto Body, Welding, Carpentry, Health Careers, Air Conditioning, and Industrial Electricity; but, not enrolled in Sheet Metal or Commercial Art. Sheet Metal was not considered an appropriate placement due to the high level of mathematics involved, the grade level of the related reading required, and safety hazards. Commercial Art was closed in light of the highly competitive nature of the trade area.

As LINK expanded to the Chapman Vocational Education Center, the committee requested that Drafting be closed to LINK students because of the competiveness of the trade and the high degree of mathematics involved.

Based upon the experiences encountered during LINK's three years of operation, several conclusions were made regarding appropriate shop placement. These are discussed below.

- Health Careers at Kenton County Vocational School offered an exploratory, as opposed to skills-based, curriculum thus equipping the student with only a few salable skills upon completion of the course. This was a viable approach for students with the potential for post-secondary training. This was not the case with many EMH and LD students. The EMH student might profit from a limited curriculum including; orderly, nurses aide, housekeeper, dietary aide, and other occupations requiring limited skills. The LD student many times may handle the class well and desire further training in specialized areas at the secondary or post-secondary level. As can be seen, the approach and emphasis of the Health Careers curricula rely heavily on the individual students' abilities.
- It was discovered, when placing students in Industrial Electricity and Air Conditioning, that, generally, students had difficulty completing prescribed instruction. This was not always due strictly to the students or shop teacher's abilities; but, rather, the lack of ability on the part of the LINK teacher to effectively communicate regarding these trade areas. These occupational areas were the most difficult for the LINK Teacher to

comprehend. As a result, the supplementary assistance the student received from the LINK teacher was limited.

- Sheet Metal was opened to certain students exhibiting basic computation and strong reading skills during the second year of LINK's operation. As was expected, students had difficulty with the math and reading required; but, the students were successful and training occurred.

When considering the specific shops as possible training sites for LINK students, several factors were taken into account in determining the shop's feasibility with regard to serving the handicapped. These factors are discussed below.

1. The skills of the staff involved in trade related teaching is of major concern. The teacher who cannot deal effectively with the non-handicapped will more than likely be ineffective with the handicapped student. Ideally, the shop teacher involved in the LINK process would possess a solid curriculum from which to work, practice sound teaching techniques, anticipate becoming a better instructor as a result of being involved in a mainstream program, and readily accept the cooperative teaching idea. In reality, the attitudes and teacher processes necessary for smooth implementation were not adopted by all staff members. These teacher attributes take time and, at best, minimal achievement may be expected with some staff.

2. The marketplace or labor force requirements in the geographical area also deserves consideration when determining feasibility. A student whose curriculum has been modified to include specialization in one or more jobs (as opposed to completing the entire curriculum) is more likely to be employable in a metropolitan area where specialty shops are commonplace. From this, it can be assumed that a LINK program might be more easily implemented in a metropolitan area.

3. The skills of the non-vocational or LINK teacher also influence vocational program's feasibility in the LINK process. In shops where the subject matter was particularly difficult for the LINK teacher, the shop teacher and student received less assistance. This put more responsibility on the shop teacher in the training process. As a result, students were not placed in these shops unless the trade teacher demonstrated the ability and willingness to handle the situation.

Appropriate shop placement involved not only assessing the student but also assessing the shop and trade area. The assessment process, however, did not end once the student had been enrolled. During the first critical weeks of instruction, each LINK student was monitored closely by the shop and LINK teachers. Informal testing, by LINK and shop teachers, took place early in the year for the purpose of determining a path and sequence of instruction appropriate for the student.

C. Curriculum Modification

The idea of curriculum modification was brought about as a result of the comprehension level of many special education students. In the past, those students not able to complete the course received low grades and "incomplete" reports from their vocational instructors. The solution to this problem, on a smaller scale, was in the hands of the LINK teacher and the vocational personnel who would deal with LINK students. On a much larger scale, at the administrative level, a total curriculum revision effort was mandated region-wide. (The curriculum revision is discussed in Section I.)

As a result of region-wide and individual efforts, an individualized curriculum approach was completed for all shops including those that would serve the handicapped. On the following pages is a breakdown of Carpentry which served as a guide to student training and specialization suited to this industrial area. This is a condensed version of several units of instruction designed in accordance with D.O.T. specifications.

CARPENTRY

To be employed as a Cabinet Maker, Millworker, Off Bearer, or Factory Laborer, based on V-TECS CBVE and course structure, the student will demonstrate knowledge of and practice in the following processes and skills:

1. CBVE Module 20 - Safety
2. " " 7 - Sharpening twist drills and auger bits
3. " " 8 - Sharpening and caring for saw blades
4. " " 9 - Sharpening and caring for chisels and plane irons
5. " " 10 - Boring and cutting holes
6. " " 11 - Driving and setting nails
7. " " 17 - Cutting with portable saw
8. " " 18 - Planing stock with planer and jointer
9. " " 19 - Identifying and caring for lumber
10. " " 21 - Measuring and lay out
11. " " 22 - Cutting with table saw
12. " " 23 - Maintaining portable power tools
13. " " 24 - Cutting stock with radial arm saw
14. " " 64 - Planing with hand plane

15. " " 65 - Planing stock with power hand plane
16. " " 66 - Shaping and routing with portable electric router
17. " " 67 - Shaping with wood shaper
18. " " 68 - Making miters
19. " " 69 - Making joints
20. CBVE Module 70 - Gluing stock
21. " " 71 - Sanding and preparing surfaces
22. " " 106 - Building cabinets

CARPENTRY

To be employed as a Rough Carpenter (rough finishing), based on V-TECS CBVE and course structure, the student will demonstrate knowledge of and skill in the following processes:

1. CBVE Module 20 - Job safety
2. " " 34 - Framing wall openings
3. " " 35 - Framing exterior walls
4. " " 36 - Installing wall sheathing
5. " " 37 - Framing partition walls
6. " " 38 - Framing special partitions
7. " " 39 - Installing a ceiling frame
8. " " 40 - Planing a roof
9. " " 41 - Framing gables
10. " " 42 - Building roof trusses
11. " " 43 - Framing gables
12. " " 44 - Installing purlines, collar ties, and kneewalls
13. " " 45 - Framing roof openings and roof saddles
14. " " 46 - Installing roof sheathing
15. " " 47 - Flashing roofs
16. " " 111 - Laying out straight run stairs
17. " " 112 - Cutting and fitting stair components
18. " " 113 - Installing pre-built stairs

CARPENTRY

To be employed as a Form Builder (foundation builder and installer), based on V-TECS CBVE and course structure, the student will demonstrate knowledge of and practice in the following processes:

1. CBVE Module 20 - Job safety
2. " " 26 - Designing footings
3. " " 27 - Setting anchor bolts
4. " " 28 - Identifying framing components
5. " " 29 - Building saw horses
6. " " 72 - Constructing footing forms
7. " " 73 - Constructing wall forms
8. " " 74 - Aligning and bracing form walls
9. " " 75 - Installing special openings in concrete forms

10. " " 76 - Setting screeds and expansions
11. " " 77 - Installing column and pier forms
12. " " 78 - Constructing stair forms
13. " " 79 - Installing vapor barriers and water seals
14. " " 80 - Cleaning and repairing forms

CARPENTRY

To be employed as a Finish Carpenter (exterior finish, siding, shingles, etc.) based on V-TECS CBVE and course structure, the student will demonstrate knowledge of and practice in the following processes:

1. CBVE Module 20 - Job safety
2. " " 48 - Installing shingles
3. " " 49 - Building cornices
4. " " 50 - Installing wood siding
5. " " 90 - Calculating cost of siding
6. " " 91 - Installing door and window trim
7. " " 92 - Building and installing window and door frames
8. " " 93 - Installing louvers and siding to gable wall
9. " " 94 - Applying composition and wood shingle siding
10. " " 95 - Building porches
11. " " 96 - Installing garage doors
12. " " 97 - Installing storm doors and storm windows
13. " " 98 - Installing pre-fabricated siding
14. " " 99 - Installing columns and trim

CARPENTRY

To be employed as a Finish Carpenter (interior finish-hardwood flooring, wallpaper, tile, dry wall, etc.) based on V-TECS CBVE and course structure, the student will demonstrate knowledge of and practice in the following skills:

1. CBVE Module 20 - Job safety
2. " " 51 - Installing interior dry wall
3. " " 52 - Installing paneling
4. " " 53 - Cutting and installing molding
5. " " 54 - Cutting irregular shapes
6. " " 100 - Installing plaster lath and grounds
7. " " 101 - Laying flooring
8. " " 102 - Installing window trim and hardware
9. " " 103 - Installing door jambs
10. " " 104 - Installing doors
11. " " 105 - Installing door trim and hardware
12. " " 106 - Building cabinets
13. " " 107 - Building metal units
14. " " 108 - Constructing special built-in units
15. " " 109 - Installing special units
16. " " 110 - Finishing interior surfaces

CARPENTRY

To be employed as a Roofing Specialist, based on V-TECS CBVE and course structure, the student will demonstrate knowledge of and practice in the following processes:

1. CBVE Module 20 - Job safety
2. " " 48 - Installing shingles
3. " " 49 - Building cornices
4. " " 50 - Installing wood siding

D. Follow Through - Individual Education Program and Progress Report

As mentioned in the shop placement process, each student was assessed by the shop and LINK teachers early in the year. With the results of these formal and informal assessments in hand, meetings were set up involving the Principal, shop, and LINK teachers. The result of these meetings was the "vocational" Individual Education Program (I.E.P.) written for each LINK student.

The basic components of the I.E.P. are listed below.

1. Present level of educational/behavioral performance; written summary of strengths and weaknesses.

2. Annual goals.

3. Short-term objectives for each annual goal (measurable intermediate steps between present level of educational/behavioral performance and the annual goals). Short-term goals are designed to serve as check points towards annual goals.

4. A list of specific services needed to reach the annual goals.

5. The extent that the child will be in regular class.

6. The projected dates for initiation of special services.

7. The duration (expected time period) of special services.

8. The objective criteria and evaluation procedures.

9. The schedule for annual review.

The student's initial I.E.P. was written at the high school. It included a very general statement about the student's vocational placement; for example, "the student will enter Welding class at Kenton County Area Vocational Education Center." At the vocational school, a need was felt for a more specific definition of goals and objectives suited to each individual student which resulted in the vocational I.E.P.

The Annual Goals for the student included Skill-Based Goals, Behavioral Goals (if necessary), and other goals as needed. Also at this time, a decision was made regarding any curriculum modifications that were to be employed. Figure 5-1 illustrates the I.E.P.

format used by the vocational staff, based upon the Competency Based Curriculum approach of the Region.

The Student Progress Report stemmed from the need to keep quick yet accurate records and documentation of the student's everyday activities and behavioral observations. (The format used for the progress report is shown in Figure 5-2.)

Progress reports were completed on each student bi-weekly or as the need for a progress check arose. These reports were completed by both LINK and shop teachers and were signed by each.

As shown in Figure 5-2, space was provided for shop and class grades and accomplishments and upcoming assignments. Also, a section for additional comments was provided. Included in these comments were behavioral observations, documentation of such behaviors, and other information as it related to the I.E.P.

This information was shared with the student, parents, and home high school teacher. It gave concerned personnel and the student quick and easy access to a current record of pupil progress at the vocational school. The information from the Progress Report could be written into the formal I.E.P. to assist in gauging student progress in relation to goals set.

It should be pointed out that access to all student records must be carefully controlled. The school has implemented a confidentiality log (see page 78) for control and access purposes.

INDIVIDUAL EDUCATION PROGRAM: Total Service Plan

SAMPLE
BEEC-8

Child's Name Joe Doe

Birthdate 2-20-64

School Sunset High School

Date of Program Entry August 19, 1980

Summary of Present Levels of Performance

Strengths: Mainstreamed 2 periods at High School, math, P.E., 7.1 overall math, scored well within norm on vocational assessment for welding trade.

Prioritized Annual Goals:

1. The student will demonstrate those tasks identified for first year students in Gas Welding & Production Line Welding.
2. The student will demonstrate on-task behavior with minimal supervision.
3. The student will complete prescribed portions of Personal Development Curriculum in Phase I & II.

Weaknesses: Reading 3.2 overall, enrolled sp. English and history due to reading level. Easily distracted, difficulty with on-task completion. Difficulty in written communication.

Short Term Objectives	Specific Educational and/or Support Services	Person(s) Responsible	Amount of Time	Beginning & Ending Date	Review Date
1a. Given M-1 & 2, view and demonstrate with 100% accuracy.	Structured vocational program with LINK assist.	Shop Tea.	13 Hrs. Week	Aug. 19-May 20	May, 1981
1b. Given M-4 view and demonstrate with 100% accuracy.	Same as above.	" "	"	" "	" "
1c. Given M-5 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	" "
1d. Given M-6 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	" "
1e. Given M-7 & 8 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	" "
1f. Given M-11 view and demonstrate with 85% accuracy.	Same as above.	" "	"	" "	" "
1g. Given M-12 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	" "
1h. Given M-13 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	" "
1i. Given M-14 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	" "
1j. Given M-15 view and demonstrate with 80% accuracy.	Same as above.	" "	"	" "	" "
1k. Given M-17 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	" "

Figure 5-1

Total Service Plan (Continued) Name JOE DOE SAMPLE Page 2

Short Term Objectives	Specific Educational and/or Support Services	Person(s) Responsible	Amount of Time	Beginning & Ending Date	Review Date
1l. Given M-18 view and demonstrate with 100% accuracy.	Structured Vocational Program with LINK assist.	Shop Tea.	13 hrs./ Week	Aug. 19 May 20	May, 1981
1m. Given M-27 & 28 view and demonstrate with 80% accuracy.	Same as above.	" "	"	" "	"
1n. Given M-29 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	"
1o. Given M-30,31,32,33,34,35 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	"
1p. Given M-36,37,38,39,40 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	"
1q. Given M-60 view and demonstrate with 90% accuracy.	Same as above.	" "	"	" "	"
1r. Given M-69 view and demonstrate with 80% accuracy.	Same as above.	" "	"	" "	"
1s. Given M-72 view and demonstrate with 80% accuracy.	Same as above.	" "	"	" "	"
1t. Given M-78 view and demonstrate with 80% accuracy.	Same as above.	" "	"	" "	"
1u. Given M-79 view and demonstrate with 85% accuracy.	Same as above.	" "	"	" "	"
1v. Given M-80 view and demonstrate with 85% accuracy.	Same as above.	" "	"	" "	"
2a. Joe will perform on task to completion 80% of time	Behavior Management student and staff contract.	Shop, LINK	2 Hrs.	" "	"
3a. Given a list of 30 job application-related words per week. Jerry will identify and define with 100% accuracy.	LINK Classroom	" "	"	" "	"
3b. Joe will complete all activities in Phase II Money time and pay with 90% accuracy..	Link Classroom	" "	"	" "	"

Figure 5-1 (Cont.)

SAMPLE

Total Service Plan (continued) Name Joe Doe Page 3

Objective Evaluation Criteria for each Annual Goal Statement

Goal 1 - To be evaluated by shop teacher using progress reporting and checklist.

Goal 2 - To be evaluated by shop and LINK teachers using observation charts.

Goal 3 - To be evaluated by LINK teacher using checklist and pre and post tests.

Committee Recommendations for Specific Procedures, Techniques, Materials, (Include Information About Learning Style)

Allow student to use demonstration approach as opposed to written communication when possible.

Highly structured specific shop experiences.

Description and % of time in regular classroom	Committee Members Present
13 Hrs. per Week - Regular Shop 2 Hrs. per Week - LINK	Principal - Mrs. D. J. Smith Voc. Ed. Teacher - Mr. M. A. Riley LINK Teacher - Ms. D. T. Jones Parents - Mr. & Mrs. Doe Student - Joe Doe
Placement Recommendation:	
Vocational Program LINK Program	**Date(s) of Meeting(s)** September 2, 1980

51

52

Figure 5-1 (Cont.)

53

NAME: SHOP: A.M. OR P.M.

WEEKS	PROGRESS	COMMENTS & OBSERVATIONS
Aug. 22 - Sept. 5	Shop Class LINK	
Sept. 5 - Sept. 19	Shop Class LINK	
Sept. 19 - Oct. 3	Shop Class LINK	
Oct. 3 - Oct. 17	Shop Class LINK	
Oct. 17 - Oct. 31	Shop Class LINK	
Oct. 31 - Nov. 14	Shop Class LINK	
Nov. 14 - Nov. 28	Shop Class LINK	
Nov. 28 - Dec. 12	Shop Class LINK	

Figure 5-2

SECTION VI

TEACHING TECHNIQUES

This section examines some of the general and specific strategies that work for the EMH/LD students in the LINK and vocational shop. As discussed earlier, the staff at Kenton County Area Vocational Education Center attended a workshop during which student disabilities and strategies to deal with these disabilities were discussed at length. During this workshop, it was first pointed out that the EMH/LD student could be trained in essentially the same manner as the non-handicapped student. Training would generally take longer, but that much was already known about educating the handicapped in the regular classroom.

Interest and motivation were noted as critical factors in the learning process. For this reason, teachers were asked to involve students in class activities from the very beginning. Also, initially, the shop and LINK teachers were to design simple "fail-proof" tasks that would serve to help rid the student of the expectance to fail.

General techniques discussed at the workshop emphasized that instruction for the EMH/LD student must be:

- Organized: instruction should occur in steps that logically and clearly follow one another.
- Visual: using films, slides, drawings, demonstrations, or charts in conjunction with more traditional techniques.
- Well defined: pointing out obvious connections and telling the student exactly what he/she must do.
- Sequenced: breaking difficult tasks into smaller, less time-consuming tasks.
- Reinforced: making clear to the student that new assignments are a result of previous work completed.

A discussion of communication techniques, effective with LINK-type students, was also conducted during the workshop. Concerning communication, the teachers were asked to:

- Talk to the student on a person-to-person level with emphasis on precision and specifics.
- Speak in concrete terms eliminating abstractions whenever possible.
- Take their time, to avoid rushing themselves and the student.
- Question the student periodically to be certain he/she is following the path of instruction.
- Demonstrate as opposed to talking about a concept.

An important issue covered during the workshop concerned individuality of learning styles. Each student learns best through a different modality or approach to instruction. To illustrate this concept, a hypothetical student was used with the workshop participants.

STEVE (The Hypothetical Student)

Steve was diagnosed as Learning Disabled due to a wide discrepancy between his estimated potential and consistently poor academic performance. Steve exhibited specific disabilities in reading, writing, and oral communications which affected his vocational and academic progress. His strengths lay in his interest in auto technology and his mechanical aptitude.

Based on this information and further hypothetical observations of the student's behavior, a set of appropriate learning modes were decided upon, in the workshop, by the participants. Appropriate learning modes for this student included:

- Audio-visual presentation
- Simplified or modified reading assignments.
- Programming of instruction.
- Demonstration when possible.

At this point, the concept of the student's instructional style was introduced. What sort of teacher-constructed instructional setting would best suit this student? Would he work best alone, involved in the Buddy System (paired with a peer), in small group or large group instruction, or one-to-one with the teacher?

Workshop participants prescribed for Steve three Instructional Settings: the Buddy System, a small group, and one-to-one with the teacher.

The general concensus of the participants concerning this preservice workshop was positive. It served to eliminate some of the apprehension concerning the special needs student in the vocational class.

OTHER TEACHING TECHNIQUES

More specific teaching techniques used on a day-to-day basis by the LINK teacher are presented in detail in the following paragraphs.

In several cases, taping the vocational texts became necessary. For example, the Welding text used at Kenton County Area Vocational Education Center was written on a college level. By eliminating the necessity to read the material and conveying the information through

the auditory modality, students with reading or perceptional disabilities were more likely to absorb the information. In addition to taping the texts, it was found that descriptive fill-in words could be dropped from the text (not changing the contents) and replaced with vocabulary understood by the student.

Modification of regular shop work sheets and handouts worked well for students. Adding in definitions and pointing out obvious connections that may not have been clear, assisted the student in processing and internalizing the information. For example, if a student brought in a work sheet on welding joints, the LINK teacher pointed out where the joint got its name (LAP joint - because the two pieces of metal overlap) providing the student with an association he/she may not have made.

In the case of a student with a visual-perceptual problem, efforts were made to replace visual input with auditory stimuli. For instance, the teacher would give oral instruction as an accompaniment to written directions for this type of student. The opposite would hold true for a student that displayed difficulty in processing auditory information. He or she was given written directions to accompany a task. For example, the shop teacher would write down those steps involved in a tune-up instead of just explaining the process. Students of this nature were also given access to lecture notes to enable them to pick up information missed during lectures.

Simplification of student study aids, such as charts, assisted the student in "getting the idea." In one instance, a welding rod chart was made clearer by taping the actual rods to the chart thus adding the dimension of concrete reality to a basically abstract idea.

Individualized oral testing was set up on an as-needed basis for students. This approach afforded students the opportunity to ask questions about an item and receive assistance with spelling, thus minimizing a reading or writing disability.

Work or Work/Picture cards were used extensively to train the student in the appropriate use of trade terminology. Each trade area has a language that must be mastered if proficiency is expected. In welding, for example, word/picture cards were used for memorizing types of joints commonly used.

Extensive use was made of the trade-related math workbooks supplied by the shops. For those shops that did not supply math texts, teacher-made materials were designed appropriate to the trade area and the student's level of functioning. For example, a carpentry student studying multiplication would be given problems figuring square feet, or something along these lines, pertinent to what was being studied in the shop.

In most cases, the study habits of LINK students were inadequate. Assisting the students in developing effective study prac-

tices became a regular part of the LINK curriculum. In particular, note taking during class lectures was a problem for the majority of students. Illustrating this problem, two students enrolled in Auto Body were missing the bulk of lecture material in class. After having discussed this problem with the shop teacher, it was decided that the lecture notes would be given to the LINK teacher in advance of the day the lecture would take place. The LINK teacher would then go over the notes with the student highlighting important information; thus, assisting the students in taking class notes, condensing information, constructing information, constructing beneficial study sheets, and reinforcing shop information.

Modification of the student's program was a cooperative effort between LINK and shop teachers. Each student was encouraged to complete the total program; however, when this did not seem feasible, a more specific occupational objective was developed for the student. For example, this type of modification was used in an Industrial Electricity class with a LINK student. The student studied extensively those skills necessary to be competent in routine maintenance wiring. After two years of training, the student developed sufficient competency to be able to be employed in this occupation.

The "Buddy System" (pairing one LINK student with a regular vocational student) was employed, when appropriate, and served as an effective alternative method to traditional instruction. One LINK student, enrolled in Industrial Electricity, was paired with another student to work on the electricity trainers in completing designated assignments. The non-handicapped student provided a study and activity model for the LINK student, thus the student was encouraged to participate by a peer.

Adaptation of student materials was an on-going process. Individualization of materials consisted of:

- Taping of text material.
- Putting text information into note form.
- Enlarging text diagrams for the purpose of labeling or explaining in detail.
- Designing visual charts from abstract concepts.

One major source for designing alternative teaching/learning strategies used by the LINK and shop teachers was Carter's, "Teacher Behavior and Classroom Casualties."[1] Carter identified a number of common learning problems exhibited by the special needs learner and provided teaching strategies for each problem area. (It should be noted that this is not a comprehensive list and that strategies, other than those listed, may at some point be more beneficial to individual students.)

[1]Carter, R.M., "Teacher Behavior and Classroom Casualties," American Vocational Journal,1975, 50, 6. (Copied with permission.)

(CARTER - "TEACHER BEHAVIOR AND CLASSROOM CASUALTIES")

Reads slowly	Supply information in forms other than the written text. Allow student to practice reading very brief selections in class. Build motivation by showing place of reading in life and employability. Use yourself and others as models of people who like to read. If possible, arrange for a tutor.
Is slow to grasp generalizations	Move from the simple to the complex. Try to always relate sub-concepts to major concepts. Present ideas or concepts in various ways. Summarize every lesson.
Has difficulty with abstract ideas	Present actual sample of each object studied, and give concrete example of each concept introduced. Relate abstractions to reality in terms of the student's perception. Build instruction on student's experience.
Fails to broaden perspective	Plan short, local field trips. Teach local transportation means.
Solves problems slowly, can't make decisions	Provide information on the problem-solving and decision-making processes. Analyze case situations for ways to identify and solve problems. Give student practice in solving practical problems as identified by the class. Use cooperative planning to solve organizational problems in the classroom.

Perceives time differently	Teach time concepts. Reorient your own emphasis on time. Relate punctuality to employability.
Is prejudiced or biased	Emphasize that all people possess the same human qualities. Stress the richness of cultural diversity. Organize a "learn about people" fair. Provide a model of an unprejudiced behavior.
Is overconcerned with surface appearance	Serve as a model who values people for what they are, not for their outward appearance. Use value clarification techniques. Use encounter devices.
Is insecure	Be consistent and fair. Make ground rules understandable and enforceable. Use devices to build self-confidence. Move the student toward responsibility for self and learning.
Feels trapped by fate	Permit student input into decision making. Give instruction in decision making in society. Through school activities, show how individuals affect events. Show community action projects run by local people.
Feels isolated and ignored	Use participation gimmicks in class. Develop friendship skills and attitudes. Use group feedback and analysis techniques. Involve student in planning committees for school activities.

Is uneasy in social situations	Provide instruction in social behavior. Practice Social Behavior in Class. Involve students in extra-curricular activities.
Is sensitive to own differences	Teach human variability concepts. Build tolerance of self and others. Use positive group feedback techniques. Discuss problem frankly.
Demands structured environment	Develop cooperative ground rules for classroom activities. Teach concepts related to self-confidence. Build from dependence to independence.
Verbalize excessively	Record and analyze conversations. Teach interaction principles. Use transactional analysis. Plan nonverbal activities, including manipulative activities.
Is physically aggressive	If possible, provide energy outlets. Relate aggression to its consequences. Refer to counselor.
Is argumentative	Analyze transactions in class. Record class verbalizations. Show how contentiousness can affect employability.
Uses sarcasm directed at people	Portray probable effect on human relationships. Use group feedback techniques. Role-play reversal situations.
Expresses hostility toward people and ideas	Use transactional analysis. Use encounter group activities. Teach human relations concepts, showing results of hostility in terms of human relationships.

	Use counselors as resource persons. Plan step-by-step improvement.
Lives in deteriorating environment	Teach community action concepts. Build toward leadership behavior. Teach managerial skills. Work on practical housing ideas. Teach consumer protection.
Has grooming problems	Teach grooming skills. Relate grooming to employability.
Appears apathetic, lazy, or bored	Build motivational devices into classwork. Relate content to reality. Check for malnourishment. Investigate sleep patterns.
Displays atypical behavior	Record actions for purposes of analysis. Teach socially acceptable behavior. Show results of behavior in terms of employability.

The modification techniques employed by the LINK shop teachers were limited only by their imagination. Creativity and enthusiasm on the part of the teaching staff created a learning environment conducive to individuality and modification, with a never-ending list of successful solutions.

SECTION VII

INSTRUCTIONAL MATERIALS

In selecting materials appropriate for the EMH/LD student enrolled in LINK, several steps were observed. Readability tests were conducted on written materials that students would encounter during the school year while audios, visuals, games, and other instructional devices underwent content and format analysis.

A Readability Analysis gave the approximate reading grade level of written materials. These written materials would include work sheets, module readings, and exercises that would be read by the students. A quick Readability Analysis pointed out lengthy sentences that could inhibit comprehension, words that were likely to cause the student problems, and provided a self check for teacher-made materials. Based on information gained from the Readability Analysis, the teacher was able to make necessary sentence structure changes and construct vocabulary lists based on difficult terminology, thus assisting the student to work as independently as possible.

In determining the appropriateness of written materials, other factors were taken into consideration:

1. Double column pages tend to be more legible.

2. Large well-spaced print increases legibility.

3. Spacing between lines and large margins are conducive to comprehension.

An analysis of Content and Format focused on the suitability of the content, alternative uses for the material, the type of illustrations used, and so on.

When previewing Instructional Materials for the purpose of content and format analysis, the following were considered:

1. Is the material potentially interesting for the student(s) for whom it is intended?

2. Are the skills, attitudes, and knowledge it will develop congruent with the objectives outlined for the unit of instruction?

3. Are the goals specific? Can teachers and students evaluate performance?

4. Does the material provide reinforcement for correct responses and rectify errors immediately?

5. Does the material lend itself to group and individual instruction?

6. Can the material be easily modified to suit the individual learner?

7. Are the directions for use easily interpreted by learner and teacher?

8. Does the material have diagnostic value?

9. Are the illustrations appropriate for the learner?

10. Does the material dispel the idea of traditional sex and occupation roles?

These are just a few of the questions posed when Content and Format Analysis were conducted. Other guidelines and criteria were added or deleted as the learners' needs changed.

Based on the examination of materials considered and the varied learning styles of special needs students, a list of materials was compiled. (This list serves in a strictly informational capacity and should not be considered promotional.) Instructional areas included in these lists are:

Occupation and Trade Orientation

Job Seeking and Keeping Skills

Daily Living Skills

Trade and Skill Related

OCCUPATION AND TRADE ORIENTATION

TITLE	MODE OF INSTRUCTION A-Audio V-Visual T-Tactile	INSTRUCTIONAL STYLE Group Individual Both	MANUFACTURER OR PUBLISHER
Automotive Repair Series	A/V	Both	ATC Publishing Corporation
Building Trade Series	A/V	Both	" "
Health Services Series	A/V	Both	" "
Singer Work Samples	A/V/T	Individual	SVE Corporation
Shop Safety	A/V	Both	Interpretive Ed.
Occupational Information Program	A/V	Individual (can be adapted)	Singer Career Systems

JOB SEEKING AND KEEPING SKILLS

TITLE	MODE OF INSTRUCTION A-Audio V-Visual T-Tactile	INSTRUCTIONAL STYLE Group Individual Both	MANUFACTURER OR PUBLISHER
The Resume	A/V	Both	SVE Corporation
Finding and Getting a Job Series	A/V	Both	" "
Interview	A/V	Both	" "
Personal Appearance	A/V	Both	" "
Self Concept	A/V	Both	" "
You and Your Supervisor	A/V	Both	" "
You and Your Co-Workers	A/V	Both	" "
Language of Work Series	A	Both	Educational Designs Inc.
Reading the Help Wanted Ads	A	Both	Media Materials
The Resume and Letter of Application	A	Both	" "
Filling Out a Job Application	A	Both	" "

DAILY LIVING SKILLS

TITLE	MODE OF INSTRUCTION A-Audio V-Visual T-Tactile	INSTRUCTIONAL STYLE Group Individual Both	MANUFACTURER OR PUBLISHER
Money Management Series	A/V	Both	SVE Corporation
Bills - How to Pay Them	A/V	Both	Interpretive Education
How Much Do I Have To Spend	A	Both	Media Materials
Counting Money and Making Change	A	Both	" "
Charge It - Using Credit Cards	A	Both	" "
The Yellow Pages	A	Both	" "
The White Pages	A	Both	" "
Everyday Skills for General Math	V	Individual	Merrill
Real World Skills for General Math	V	Individual	"
Lakeshore Classroom Money Kit	T	Individual	Holcomb
Check Books	T	Both	(Can be supplied by local banks)
Merrill Life Skills Math	Paper & Pencil	Both	Merrill Pub. Corporation
Kaleidoscope Readers	Reading Series	Individual	Addison-Wesley

TRADE AND SKILL RELATED

TITLE	MODE OF INSTRUCTION A-Audio V-Visual T-Tactile	INSTRUCTIONAL STYLE Group Individual Both	MANUFACTURER OR PUBLISHER
Hand Tools in School Shops	A/V	Both	Interpretive Education
Router and Shaper	A/V	Both	RMI Media Productions Inc.
Metal Shop Safety	A/V	Both	" "
Band, Jib, and Saber Saws	A/V	Both	" "
Circular Saws	A/V	Both	" "
How to Use the Oxyacetylene Welder	A/V	Both	" "
Singer Work Samples	A/V/T	Individual	SVE Corporation
Stethescope/Blood Pressure Cuff	T	Both	Health Careers (Shop)
Thermometer	T	Both	" " "
Scale	T	Both	" " "
Linens	T	Both	" " "
Metric Measuring Tools	T	Both	" " "
Microscope	T	Both	" " "
Carburetor (Mounted for instructional use)	T	Both	Auto Mechanics (Shop)
Micrometer	T	Both	" " "
Model Spray Gun	T	Both	Auto Body (Shop)
Tape Measures	T	Both	Construction (Shops)
Rulers	T	Both	" "
Various Shop Tools	T	Both	" "

TRADE AND SKILL RELATED (Cont.)

TITLE	MODE OF INSTRUCTION A-Audio V-Visual T-Tactile	INSTRUCTIONAL STYLE Group Individual Both	MANUFACTURER OR PUBLISHER
Electrodes	T	Both	Welding (Shop)
Skills Orientation Series - Bldg. Maint. Cluster - Mfg. & Processing Cluster Bldg. Trades Cluster	A/V (with supplementary activities for development)	Both	Singer Career Systems

SECTION VIII

STUDENT AND PROGRAM EVALUATION

STUDENT EVALUATION

To ensure thorough evaluation of student progress, three theoretical constructs were used: the Affective (attitudes, feelings...), Cognitive (knowledge...), and Psychomotor (skills...) domains. The selection of specific evaluative criteria was based on the type of disability possessed by the student and which instructional method(s) were prescribed to minimize and/or overcome the specific disability.

For example, alternatives to paper and pencil tests were needed for each theoretical domain. Evaluation of the Affective domain included the utilization of various types of testing instruments coupled with the use of verbal rather than written responses by the student. Similarly, the Cognitive domain was evaluated through modified approaches such as verbal identification of content and demonstration, as opposed to written verification, of concepts and content. Psychomotor or skills evaluation was conducted basically as for all students but was further supported by using observation check sheets tailored to specific task performance criteria.

The following guidelines merit special consideration when choosing an evaluative technique for the EMH/LD student.

1. Use concrete, meaningful terms in test items, whenever possible.
2. Keep test items short.
3. Be certain that the reading involved is at or below the student's frustration level.
4. Use non-verbal responses, when possible.
5. Choose a test that can be broken down into short sessions, if necessary.
6. Provide oral presentation of test items, when needed.

On a day-to-day basis, regular shop tests or a modification of those tests were sufficient. In special cases, test items were reworded, broken down, illustrated, presented orally, or demonstrated. An example of a test item that could be demonstrated would be: LIST EACH STEP IN SETTING UP AN OXYACETYLENE WELDING STATION. Instead of requesting that the student write out the answer, he or she could demonstrate the correct procedure, thus circumventing a writing disability.

Evaluation processes used to assess student progress included:

1. Shop Grades. This type of evaluation was based on traditional grading scales and assumptions. A grade of "C" was used to indicate minimum satisfactory completion of prescribed instruction. The letter grade was determined through an accumulation of periodic teacher assessments, criterion - referenced measures (where available), and other related criteria used for all students.

2. Certification of task completions. Competency Based Vocational Education (CBVE) evaluative measures provides a task-by-task, ongoing tracking of student progress without group comparisons. CBVE task lists assisted in plotting and recording a specific path of instruction, based on an occupational title as a goal, for each student. As needed, the student completed the CBVE module with assistance from the LINK teacher. Demonstration of the performance criteria took place in the shop under the supervision of the shop teacher. With this team approach, the student was assisted through each step of the CBVE process in a carefully controlled, supervised manner. The CBVE process further provided for the lessening of the emphasis on time elements and enhancing of the importance of proficiency. This permitted the student to progress at a comfortable rate without the pressures of group comparisons. The number of tasks completed (modules and performance) were taken into consideration as a significant part of the student's overall evaluation.

3. Behavioral Measures. These measures or evaluative criteria included Behavioral Checklists, Behavioral Observations, and Contingency Contracts.

    a. Behavioral Checklists. The Behavioral Checklist provided for on-going analysis of adjustment to the school and program, especially for those students having social or emotional difficulties with the vocational environment. The checklist was used as an everyday reference base for tracking student behavior. Periodically, the daily observations were summarized to provide the faculty with information on which to base further prescriptions of instruction for the student. These summaries resulted in both remedial prescriptions as well as curricular plans for the succeeding days and weeks. (A sample checklist is provided in the Appendix.)

b. Behavior Observation. This approach was somewhat less formalized and included general observations by the LINK and/or shop teacher targetted toward intervention on a situation-by-situation basis. Through observation, intervention was possible which either anticipated and avoided problems or permitted on-the-spot modifications to diminish or alleviate problems.

c. Contingency Contract. The Contingency Contract was a formal procedure used to focus the student's activities toward specific objectives. A very important element in the Contingency Contract is participation in the decision making process by the student as well as the faculty. This approach was especially effective with students who have difficulty with motivation.

There are two components in the Contingency Contract:

1. The Objective - i.e., What is the student setting out to accomplish?

2. The Reinforcement - i.e., What will the reward be for the student for fulfilling the student's portion of the contract?

Further, there are several critical elements in the Contingency Contract process; (cited from Homme, L., How To Use Contingency Contracting In The Classroom):

1. The Contingency Reward must be immediate.

2. Initial contracts should call for and reward small approximations.

3. Reward frequently with small amounts.

4. The contract should call for and reward accomplishment rather than obedience.

5. Reward performance after it occurs.

6. The contract must be fair.

7. The terms of the contract must be clear.

8. The contract must be honest.

In addition to these guidelines the following was added:

1. The contract must be positive.

2. The contract must be enforced consistently.

(A sample Contract is provided in the Appendix.)

Ultimately, the goal of the LINK Program was to place the student in a training-related job and to equip the student with the necessary personal and occupational skills to maintain that job. This served as the primary evaluative criterion for the student and the program. Student success, however, could also be measured in several other ways:

1. Acceptance into and continuation in the same or closely related vocational training program.

2. Average to above average shop grades, indicating satisfactory completion of prescribed instruction.

3. Mastery of identified CBVE tasks within a job title context.

4. Positive, observable behavioral change.

PROGRAM EVALUATION

Since Project LINK was an exemplary project, evaluation of the program was extensive and analyzed from various standpoints by several sources.

Internal evaluations were conducted by the LINK teacher, the Kenton County Area Vocational Education Center shop teachers and Principal; external evaluations were conducted by the Regional Staff, the Bureau of Vocational Education, and the Unit Director for Exemplary Programs.

Periodic evaluations included Quarterly Reports generated by the Kenton County Area Vocational Education Center staff for internal and external use; Annual Reports for comparable use; Anecdotal Records, mainly by the LINK Teacher to keep track of day-by-day occurences for planning and modifying the LINK program; Pragrammatic Records and Reports relating student, curricular, and material matters; and periodic review and commentary by the advisory committee.

Each of these sources, either individually or in composite, provided information concerning:

Activities, Accomplishments, and Shortcomings
Design Problems
In-Service Needs
Equipment and Material Needed
Modifications
Support Components Needed

Dissemination Activities
Historical Background References

The Quarterly Reports focused on activities, accomplishments, design problems, equipment and materials, and interim dissemination activities. The Annual Reports focused on program objectives, personnel involved in the project and their roles, activities and accomplishments for that school year, design problems and solutions, and programmatic details (budgets, inventory, etc.).

On the school level, the Principal provided leadership and direct supervision for the program participants. Further, the Principal maintained an active role in conceptual, developmental, operational and evaluative phases of the program.

At the Regional and State levels, appropriate personnel provided external monitoring and evaluative services as well as assistance in the conceptual, developmental, operational and evaluative aspects of the program.

The close monitoring of the numerous elements of Project LINK lead to the continuation of the program for three and one-half school years on the basis of the interim evaluations. Further, upon the expiration of exemplary funding, the program was integrated into the curriculum base of the school as an on-going part of the school's total program.

It is the opinion of the staff involved in this project that Project LINK, as described in this report, can be implemented in virtually any vocational training setting. Once implemented, this process, however modified to suit community and student needs and faculty and staff background and expertise, will serve the needs of a heretofore unserved population. All that is needed is a commitment to serve the handicapped and the time, patience, tenacity, and professional dedication to put the basic ingredients of Project LINK into operation.

APPENDIX

EXAMPLE: CONTINGENCY CONTRACT

Contract

This is an agreement between JOHN DOE (Auto Body) and MRS. SMITH (LINK Teacher) & MR. BROWN (Shop Teacher). This contract will be binding from SEPTEMBER 17, 1980 to OCTOBER 16, 1980. It will be discussed on OCTOBER 16, 1980.

The terms of agreement are:

I will (student) LEARN PUDDLING, WELDING, BRAZING AND FRACTIONS BY THE TIME DECIDED ABOVE.

I will (teacher(s)) TAKE ONE-HALF HOUR FROM THE TIME SPENT WITH MRS. SMITH AND APPLY IT TO THE TIME SPENT IN THE SHOP.

The terms of this contract include the completion of the student's task and the delivery, by the teacher, of the contingencies agreed upon. If the student fails to fulfill his/her part of the contract, the rewards will be withheld. If the teacher fails to provide the rewards, the student has the right to take the matter to the principal.

Date 9/16/80 Student _____

Teacher(s) _____

_____

LOG OF INSPECTION OF RECORDS OF

_____

Name of Student

NOTICE: Any person inspecting, reviewing or receiving copies of pupil records under the authority of Sec. 438 sub sec. b (4A) of the Family Educational Rights and Privacy Act of 1974 is cautioned that sub sec. b (4B) of that act provides that "personal information shall only be transferred to a third party on the condition that such party will not permit any other party to have access to such information without the written consent of the parents of the student."

Date	Name of Person Inspecting Records and Agency Represented, If Applicable	List of Records Inspected, Reviewed or Copied	Specific Reason Records Are Inspected, Reviewed or Copied

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CHECKLIST FOR STUDENT EVALUATION

Child's Name_____ Age____ Grade_____

If the item does not constitute a problem, please indicate by a check (✓) under "Not." If the item does constitute a problem, indicate by a check (✓) in the appropriate column whether "Mild" or "Severe." Please complete every item. Add any qualifying remarks you may feel are necessary. Please complete this form for each student which you initially included on the Student Referral Sheet.

TYPE OF PROBLEM			
Not	Mild	Severe	
			1. Short attention span
			2. Loud and boisterous
			3. Temper tantrums
			4. Does not work up to capacity for no apparent reason
			5. Chronic displays of unhappiness or depression
			6. Poor adjustment to environmental changes
			7. Destroys the property of others
			8. Does not understand what he (or she) reads
			9. Frequently lies or boasts
			10. Mispronounces words commonly used
			11. Often steals things
			12. Can the student recognize his own name
			13. Poor ability for abstract reasoning
			14. Disrupts normal classroom procedures constantly
			15. Feelings of inferiority
			16. At least two years or more behind in reading
			17. Relates poorly to peers in cooperative situations
			18. Frequent perceptual reversals in reading and in writing letters and numbers
			19. Shows unusual anxiety, fearfulness, or tenseness

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Child's Name_____ Age____ Grade_____

TYPE OF PROBLEM			
Not	Mild	Severe	
			20. Does the student express himself in sentences
			21. Poor visual memory-doesn't recognize a word just read on the previous line
			22. Distracted easily by things others may not even notice
			23. Shows a preference for working alone
			24. Can the student cut on a line w/scissors
			25. Can the student find objects when he/she is told where to look
			26. Is the student two years or more behind in mathematics
			27. Constantly strives to gain the attention and approval of others
			28. Clumsiness, awkwardness, poor muscular coordination
			29. Does the student anticipate results
			30. Hyperactivity, always on the go, constantly in motion, restless
			31. Crying over minor annoyances and hurts
			32. Poor handwriting
			33. Poor attendance in school or classes
			34. Defiant, impertinent, or disobedient in class
			35. Overly withdrawn or passive-does not talk or relate to anyone
			36. Possesses an irritable temperament, often erupting in temper tantrums
			37. Teases, fights with, or bullies other students
			38. Cannot follow a series of directions given orally
			39. Poor phonetic skills
			40. Variation in mood from day to day
			41. Two years or more behind in spelling and writing skills

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Child's Name_____ Age____ Grade_____

TYPE OF PROBLEM			
Not	Mild	Severe	
			42. Impaired ability to concentrate
			43. Lack of left to right orientation in reading and writing
			44. Difficulty in understanding concepts of space and time
			45. Incoherent speech
			46. Does the student tell what he/she is doing when asked by an adult
			47. Poor motor or physical education skills
			48. Difficulty following written instructions on worksheets or unsure of how to complete tasks in workbooks
			49. Perseverates-cannot end a task when appropriate, keeps doing something beyond the point at which the student should have ended the task
			50. Appears unmotivated in class or subject

PERSON EVALUATING THE CHILD:

_____
Signature

_____
Date

E X A M P L E

BEHAVIOR OBSERVATION

JOHN DOE

8/15/81
8:35--9:00

AUTO BODY CLASS - CLASSROOM SITUATION

John came in and took a seat to the back of the classroom where nobody was either sitting in front of him or to his left.

He shifted in his seat several times and made attempts to read pupil's information sheets near him.

INTERACTION WITH PEERS

Although many pupils were involved in conversation, John did not initiate conversation. He did get up from his chair to inquire about an issue to the instructor. A peer did initiate a question and John responded with a one-word answer.

MRS. S. A. SMITH

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